

ABSTRACT

A fiber optic communication system includes a device of switching and setting wavelength of optical signals used in communication by network-node equipments, which sets the mapping of the wavelength of the optical signal used in communication by the network node equipments, and the input/output ports of an array waveguide grating (AWG), so as to construct a predetermined logical network topology by a plurality of network node equipments which are connected via optical fibers to the array waveguide grating that outputs optical signals inputted to optical input ports, to predetermined optical output ports in accordance with the wavelength thereof. As well as enabling a simple construction, it is easy to realize flexible network design, construction, and operation, and different network groups can also be easily connected to each other. Moreover, a fiber optic communication system having robust security and which can be stably operated even at the time of failure is realized at low cost.